MARE ISLAND NAVAL SHIPYARD (MINS)
UNEXPLODED ORDNANCE (UXO) RESPONSE CONTRACT

Aaron H. Yasui
PACNAVFACENGCOM
Pearl Harbor, Hawaii 96860
Yasuiah@efdpac.navfac.navy.mil
Phone: (808) 474-5373
Fax: (808) 474-5383

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Abstract: This paper discusses the on-going unexploded ordnance (UXO) work presently being done at the Mare Island Naval Shipyard (MINS), near San Francisco, California. MINS is located approximately 25 miles northeast of San Francisco, adjacent to the City of Vallejo in Solano County. The entire shipyard is one mile wide and three and a half miles long. Ordnance activities have been conducted at MINS since the first magazine was constructed there in 1857. This paper includes the description of the various phases of work being accomplished at this BRAC site. The work includes planning documents, a technical approach memorandum, a pilot study for onshore and offshore work, a test plan for the validation of underwater detection systems, a statistical approach for the remedial investigation phase of work and a response action plan. The total area of work under this contract is 250 acres. The work at MINS is being modeled for the larger Navy UXO Response Contract, scheduled for award in July, 1999.

PRESENTATION

Project Background:

The presentation this morning will discuss the on-going unexploded ordnance work presently being done at the Mare Island Naval Shipyard. MINS is located approximately 25 miles northeast of San Francisco, adjacent to the City of Vallejo in Solano County. The entire shipyard is one mile wide and three and a half miles long.

Ordnance activities have been conducted at MINS since the first magazine was constructed there in 1857. The southern portion of the island was identified as a Naval Magazine and later upgraded to a Naval Ammunition Depot in the mid-30s, which allowed for the manufacturing of munitions. MINS closed in April, 1996 as a BRAC III major closure. MINS mission before closure was submarine overhaul, repair and refueling.

PACNAVFACENGCOM UXO Program Background:

The PACDIV's UXO programs started with the congressional legislation of transferring the island of Kaho'olawe to the State of Hawaii. Kaho'olawe, a 45 square mile island, off the coast of Maui was turned over to the State of Hawaii after 50 years of being a target

island for the Department of Defense. Legislation transferring the island called for a Navy and State agreed upon process for UXO clearance of the island. The legislation authorized $400 Million over a ten year period for the cleanup and restoration of the island. PACDIV has awarded a $280 Million contract for UXO clearance. The contract was awarded to the joint venture of Parson/UXB in July, 1997.

PACDIV has been tasked by NAVFAC Headquarters to develop and implement a Navy wide approach, which expands on the Kaho'olawe efforts, provides contractor incentives, promotes innovations for the cost effective and timely cleanup of UXO in a manner that is protective of human health and the environment.

MINS Contract:

The MINS contract is with Environmental Chemical Corporation (ECC) of Burlingame, California. The contract is a cost reimbursable, one plus four option year, maximum $25 Million. The contract is primarily for UXO response action with associated environmental cleanup.

The contract was awarded to assist EFA West in their MINS BRAC cleanup efforts and also to model the Navy's efforts for an upcoming Navy UXO Response Contract (NURC). The contract was awarded in July 1998. The NURC is a worldwide UXO clearance contract, which is anticipated to be centrally managed at PACDIV command headquarters at Pearl Harbor, with satellite command site management at the respective Engineering Field Divisions/Activities in the vicinity of the actual UXO clearance sites.

MINS Site Work:

There are three onshore (land) sites and four offshore (water) sites within this contract. The onshore sites covers approximately 30 acres, while the offshore sites covers approximately 220 acres.

Pilot Study:

The agreed upon first step in the technical approach for the MINS sites was to initiate a pilot study. The intent of the pilot study was to evaluate geophysical and logistical equipment at the sites due to the uncertain onshore geophysical features along with offshore underwater conditions. The draft report for the pilot study provided interesting results of existing conditions (onshore and offshore) at MINS. High background noise caused the geophysical instruments to work less than anticipated, while the offshore current and turbidity problems were greater than expected.

An underwater geographical location system was utilized to determine the diver's position during the pilot study. The contractor's DGPS unit was merged with an acoustical location system. The resultant of these technologies provided diver support personnel on the lead boat with a satisfactory position of the worker underwater.

Remedial Investigation - Ordnance Risk Assessment

Archival research and preliminary on-site findings indicates the presence of UXO in these seven sites. Again, during the technical approach phase, it was decided to perform an ordnance risk assessment to statistically sample, within the grids of each site, to analyze the need or requirement to perform response actions. The ORA process needs to be reviewed by the eventual land owners, thus discussions with the Regulators at MINS has started and a schedule for updates has been established. Regulators includes DTSC, EPA IX, RWQCB, and SWRCB.

Validation of Detection Systems.

The underwater work is the challenging portion of the work at MINS. A validation of detection systems was initiated to compare available technologies and to select the best detection system based on value, accuracy and consistency. The Navy is presently reviewing the contractor's test plan. Request for Proposal will be distributed to the detection system community soon and the on-site tests are presently scheduled at MINS in late 1999.

Remedial Investigation and Response Action.

Based on the preliminary efforts at MINS, a remedial investigation plan will be finalized in early 2000. Combining the results from the validation of underwater detection system and utilizing this technology into the ordnance risk assessment phase, the remedial investigation work is anticipated to start in early 2000. The response action work is presently scheduled for 2001.